July 2011

SAVANNAH RIVER NUCLEAR SOLUTIONS

SRNS Today

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what goes around

From silver to lead, SRS recycles

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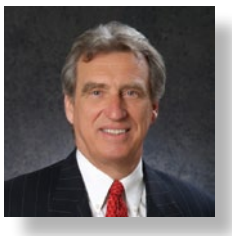

Garry Flowers
SRNS President and CEO

Welcome to the July 2011 edition of "SRNS Today."

Here at Savannah River Nuclear Solutions, we believe in the future, not only of our company but also the community. We take pride in providing support for worthy causes and this month, I'm pleased to let you know about two of those projects.

In July, SRNS broke ground on its second Habitat for Humanity house (see Page 3). Located in Warrenville, S.C., the house will become a home for Qiana Johnson and her children. SRNS volunteers will construct the house, which should be ready by Thanksgiving.

SRNS is also supporting the workforce of the future with a $10,000 donation to Augusta Technical College. This donation will fund the purchase of high-tech equipment for three new labs used to educate future nuclear workers to meet the growing demands of the area's nuclear industries.

At the Savannah River Site, environmental stewardship can refer to large-scale cleanup projects as well as the recycling of common items such as aerosol cans and fluorescent lights. This month, you'll read about our Regulatory Integration and Environmental Services group, who take pride in the future by proactively reducing waste at the Site (see the story on Page 6).

A publication note: This is the first edition of "SRNS Today," which has replaced the "SRNS News." The new design and wide range of stories and photography aim for greater accessibility for our readers. I hope you enjoy the new look, and thank you for your continued interest in Savannah River Nuclear Solutions.

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Savannah River Nuclear Solutions, LLC, is a Fluor partnership with Newport News Nuclear and Honeywell. Since August 2008, SRNS has been the management and operating contractor for the Savannah River Site, a Department of Energy-owned site near Aiken, South Carolina, including the Savannah River National Laboratory. The SRNS corporate and community offices are located in the renovated 1912 "Old Post Office" building in Aiken, S.C.

The primary initiatives of SRNS are national security, clean energy and environmental stewardship.

SRNS Today is published monthly by SRNS Public Affairs to inform our stakeholders of the company's operational and community-related activities. If you have questions or comments, please contact us at 803.952.9584.

For additional information about SRNS, please visit our website at savannahrivernuclearsolutions.com.

Hope in the heart, hearts in the work

SRNS breaks ground in Warrenville, S.C., for second Habitat for Humanity house

Qiana Johnson, wearing a pink hard hat, and her children Braylen and Shemar picked up shovels July 18, and with a toss of sandy Aiken County soil, began a new chapter in their lives.

Johnson and her family will soon be moving into a brand new house, courtesy of Aiken County Habitat for Humanity and SRNS.

The construction will be the second house that SRNS has helped build, and house number 85 for Aiken County Habitat. The first SRNS Habitat house is located in Jackson, S.C.

This new project will be located in the Warren Ridge Subdivision in Warrenville, S.C. Aiken Habitat plans to build several Habitat houses in this subdivision.

Nine volunteer crews from SRNS will rotate throughout the construction of the house. Approximately 20 SRNS workers per shift will hammer, paint, roof, wire, plumb and landscape until the house is finished. Ms. Johnson will also be assisting in building the house.

Construction is scheduled for completion in November, sometime before Thanksgiving. Most likely, it will be a Thanksgiving that the Johnson family and a group of SRNS volunteers will never forget.

Located in Warren Ridge Subdivision, Warrenville, S.C.

85th Aiken County Habitat for Humanity house

Second SRNS build

Nine SRNS crews rotating throughout the build

Scheduled for completion in November before Thanksgiving

On hand for the formal groundbreaking were (from left) SRNS Executive Vice President Fred Dohse, homeowner Qiana Johnson and her children Braylen and Shemar, Aiken (S.C.) County Council Chairman Ronnie Young, Habitat Board President Richard Harmon and Habitat Executive Director Richard Church.

SRNS in the community

Teaching teachers about radiation, energy and technology

Don Padgett (left) and Daryl Doman (right) of SRNS recently participated in a presentation given to over 25 CSRA teachers concerning the high degree of efficiency and effectiveness exhibited by SRNS Environmental Monitoring personnel at SRS. After the presentation, teachers Elizabeth Daniels (seated, left), Silver Bluff High School, and Elizabeth Humphruy, Blackville-Hilda Junior High, were provided a demonstration regarding equipment used to monitor wildlife for radiation at SRS. The presentation was given during the annual Teaching Radiation, Energy and Technology Workshop, an environmental justice initiative funded by the U.S. Department of Energy and the Environmental Protection Agency.

SRNS funds the future with donation of $10,000 for Augusta Tech program

SRNS is partnering with Augusta Technical College to fill a rapidly growing void for nuclear workers, resulting in qualified candidates for new and existing jobs related to the nuclear industry, fueling area economies.

"SRS has largely driven the nuclear economy throughout the greater Aiken-Augusta area for decades," said Garry Flowers, SRNS President and CEO. "Given the average age of our workforce, we are pleased to assist Augusta Technical College with their important mission and work with other area colleges to ensure our future needs are met as well."

SRNS is donating $10,000 to buy high-tech equipment for three new labs at Augusta Technical College that will be used to educate future nuclear workers.

"The potential economic growth directly related to future needs at SRS with a high percentage of employees nearing retirement and the nuclear renaissance that will directly impact the CSRA job market is intensive and expansive to say the least," said Walter Sprouse, Executive Director, Richmond County Economic Development.

Augusta Technical College President Terry Elam noted that even though their nuclear technology program is only one year old, it continues to grow. "We're proud to be leaders in efforts to educate students and satisfy the growing demands of area nuclear employers. We thank our friends at SRNS for partnering with us to meet this challenge."

Photo: Garry Flowers (left), SRNS President and CEO, presents Terry Elam, Augusta Tech President, with a new piece of equipment, symbolic of the SRNS $10,000 donation.

Two SRNS vice presidents assume new roles


Dave Eyler


Paul Hunt

Dave Eyler and Paul Hunt have assumed new responsibilities at SRNS, with Eyler heading up Engineering and Hunt adding Nuclear Materials Operations to his American Recovery and Reinvestment Portfolio responsibilities.

As Vice President of Engineering, Eyler is responsible for engineering and nuclear safety operations at the Savannah River Site (SRS). His specific responsibilities include engineering management, systems engineering, nuclear and criticality safety and design, and operations engineering.

Eyler assumed the engineering post with the recent retirement of former Engineering Vice President Jon Fagan.

As Vice President of Nuclear Materials Operations, Hunt is responsible for safe execution of all nuclear operations under the management and operations contract at SRS. This includes safe, secure and environmentally sound storage and disposition of all special nuclear materials and nuclear fuels and operation of nuclear facilities at SRS. Hunt also oversees SRS's budget, schedule, personnel and facility requirements for these projects. He is also responsible for safe execution of all SRNS Recovery Act operations at SRS.

SRNL's Wind Energy Program explores contributions to nation's energy mix

South Carolina and North Carolina have taken a significant step toward collaboration intended to accelerate the development of offshore wind energy on the south Atlantic seaboard.

Representatives of research institutions, government agencies and other interested organizations met recently to explore ways to leverage each state's unique experience, knowledge and resources to accelerate the deployment of wind energy in a way that benefits both states. Ralph Nichols, manager of the Savannah River National Laboratory (SRNL) Wind Energy Program, is one of the region's recognized experts in offshore wind.

> This excellent wind resource should attract investment by utilities and developers, as well as industries related to offshore wind development.
>
> **Ralph Nichols**
>
> Wind Energy Program

Nichols points out that according to Department of Energy, 33 percent of the total East Coast offshore wind energy within 50 miles of the shoreline is located off the coast of North and South Carolina. "Based on DOE's data, North Carolina and South Carolina have the largest offshore wind energy resources in shallow water on the Atlantic Seaboard," he said. "If you look at wind energy in shallow water – zero to 30 meters – and more than 12 miles from the shore, the figures are even more impressive." Distance from the shore, he said, is a significant consideration in limiting visual impacts.

"The Carolinas alone hold more than half the East Coast resource," Nichols said. "Adding Virginia and Georgia bumps that figure to more than 82 percent. This excellent wind resource, combined with outstanding port facilities in the region, should attract investment by utilities and developers, as well as industries related to offshore wind development."

A report issued earlier this year by DOE's Wind and Water Power Program pointed out that offshore wind energy can be a significant contributor to the nation's energy mix, helping the nation reduce its greenhouse gas emissions, diversify its energy supply, provide cost-competitive electricity to coastal regions and stimulate revitalization of key sectors of the economy. According to the report, *A National Offshore Wind Strategy: Creating an Offshore Wind Energy Industry in the United States*, the energy-generating potential of offshore wind is immense due to the lengthy U.S. coastline and the fact that offshore winds blow stronger and more uniformly than on land, resulting in greater potential generation.

Nichols said that among opportunities being discussed by representatives of the two states are research project collaborations, and the possibility of an offshore wind energy project along the North Carolina and South Carolina border.

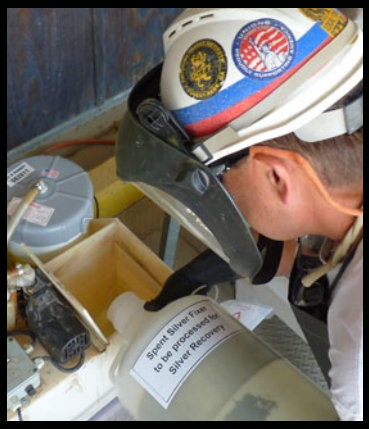
Photo: SRNL is conducting studies on wind energy-related technologies for coastal and marine environments, including the installation of SODAR technology on an offshore platform to study the tool for evaluating the potential of South Carolina's offshore wind resources.

Visitors of note

SRNL
SAVANNAH RIVER NATIONAL LABORATORY

DOE Under Secretary for Science visits SRNL to talk and listen

The DOE Under Secretary for Science Dr. Steven E. Koonin came to SRS recently for a visit he described as "mostly to listen and learn" about SRNL and SRS. "This was a great opportunity for us to show the Under Secretary the range and quality of work that we do here," said SRNL Director Terry Michalske. "Dr. Koonin told me that he was impressed with what he saw and that he believes we are taking SRNL in the right direction." Dr. Koonin's tour of SRNL —accompanied by Dr. Michalske, DOE-SR Manager Dr. Dave Moody and NNSA-SR Manager Doug Dearolph—included classified discussions of SRNL's national and homeland security work. He visited the Engineering Development Laboratory (EDL), SRNL's facility for pilot-scale experiments, tests and demonstrations, and received presentations on SRNL's clean energy work, including initiatives related to small modular reactors and regional partnerships.



what goes around

From silver to lead, SRS turns potential trash into recycled treasure

Act II

SRS materials get a second chance at life

Aerosol cans
are collected and crushed. The metal is sent off-site for recycling.

Used anti-freeze
is collected and recycled at SRS for use in heavy equipment and some vehicles.

Used oil
is collected and sampled to determine if it meets the criteria for the used oil program. Non-hazardous oil is picked up by Santee Cooper and burned to make electricity. Oil characterized as being hazardous is disposed of as hazardous waste.

"It is good to know that the Site is being proactive in the process of recycling materials that may otherwise have to be disposed of as hazardous waste,"
— J.D. Hope

For most SRS employees, putting their cans in a special trash can and separating their paper might seem like the extent of their "green" efforts. But, what they might not realize is that many things they use every day at work contain recycled materials.

Mark Pillarelli and the Regulatory Integration and Environmental Services group take care of much of this on Site. They handle aerosol cans, fluorescent light bulbs, refrigerant, oil and oil filters—even silver. "It is good to know that the Site is being proactive in the process of recycling materials that may otherwise have to be disposed of as hazardous waste," said J.D. Hope, who works with Pillarelli for environmental compliance on Site. "By doing so, it helps reduce the amount of hazardous waste being generated, along with the expensive cost for disposal, and it reduces the amount of new materials that would have needed to be purchased."

Silver is most commonly known for its use in jewelry and dinnerware. But it's also known as Environmental Protection Agency Hazardous Waste Number D011 and considered a hazardous waste in concentrations over five milligrams per liter, the same regulatory level as arsenic and lead.

Film processing produces spent-photographic-fixative, a liquid mixture containing silver at hazardous waste concentrations. Although most SRS groups have switched to digital photography, other Site groups still use the silver-containing fixative. Pillarelli's group has been recycling the spent fixative for many years. A specialized device uses an ionizing process to exchange iron for silver—leaving the liquid non-hazardous. The silver is then shipped to the U.S. Defense Logistics Agency's precious-metals pool. The last SRS shipment contained 1,159 ounces of recovered silver worth an estimated $41,000. Kevin Carr, who runs the silver extracting machines, said that he finds the work rewarding because he knows that he is adding value by reducing the amount of unneeded waste produced and by saving a precious metal that could be put to good use.

As SRS groups trade film for digital processes, SRS silver recycling will gradually disappear. However, the Site's other recycling services will be needed for years to come. "Source reduction and recycling certainly helps reduce the amount of waste materials being placed into our landfills or being incinerated, which definitely impacts the environment. It is also just the right thing to do," said Hope.

PHOTOS: Kevin Carr (top, left) works with silver recycling; Johnny Bonner places fluorescent light tubes in a bin for recycling.

Used oil filters
are collected, drained and crushed. The remaining metal is sent offsite to be recycled. The oil drained from the filter is combined with other used oil and handled with it.

Fluorescent lamps and mercury devices
are collected, packaged and sent to an off-site contractor for the actual recycling of the mercury, metal and glass.

Bulk lead
(non-radioactive only) is collected, melted down and reshaped for various SRS applications.

Lead acid batteries
are collected, palletized and sent to off-site recycling.

Refrigerant
is packaged and shipped off-site to a contractor for re-use.

SRNS in the community

Softball tournament hits a home run for United Way

The 2011 SRS United Way softball tournament raised approximately $17,000 for United Way partner agencies. This year's tournament was organized by SRNS employees Eric Schiefer, Nina Adams and Jerry Zipperer. The annual tournament began in 2005 and has raised over $96,000 for United Way. More than 200 SRS employees and friends volunteered to play in the tournament, and others served as umpires, scorekeepers and concession stand attendants. The SRNS Engineering High Flyers, coached by Zipperer, won the tournament.

SRNS' Lloyd Ward named S.C. Coroner of the Year

Lloyd Ward, a Control Room Operator in the K Area Complex, received the South Carolina Coroners Association 2011 Coroner of the Year award. Lloyd, the Barnwell County, S.C., Coroner, was presented with the award at the association's annual training conference and awards banquet held at Pawley's Island, S.C.

Leadership Association honors Dohse, Boler-Melton with awards

Two SRNS leaders were honored at the SRS Leadership Association (SRSLA) Awards Banquet, held in July.

Fred Dohse

Cynthia Boler-Melton

Fred Dohse, SRNS Executive Vice President and Chief Operating Officer, was named Executive of the Year. Cynthia Boler-Melton, Nuclear Materials Operations (NMO) Continuous Improvement (CI) Manager, was named Leader of the Year.

The Executive of the Year Award recognizes a senior executive who has gained significant recognition for managerial and leadership accomplishments, conducted both personally and through business affairs in accordance with the NMA's Code of Ethics. Dohse has demonstrated leadership skills in the safe execution of all M&O operations at SRS, as well as in the SRNS integrated safety management, in which he provides oversight, strategic operations and safety leadership. Dohse has addressed unnecessary requirements, supported Operational Excellence, implemented LEAN Manufacturing Principles, given every SRNS employee the means to take personal ownership in the company and initiated large-scale multi-facility safety drills.

In addition to his leadership accomplishments at SRS, Dohse is a sponsor and contributor to the United Way, Golden Harvest Food Bank and the American Heart Association. He is on the Board of Directors for Habitat for Humanity, the Chairman of the Savannah River Chapter of the Rocky Mountain Elk Foundation, a member of the Citizens for Nuclear Technology Awareness Organization and the SRS Leadership Association. In his free time, he enjoys spending time with his grandchildren.

The Leader of the Year Award recognizes a leader who demonstrates the same outstanding qualities as the Executive of the Year. Boler-Melton led the NMO in completing approximately 30 CI initiatives, totaling approximately $12 million in hard and soft dollar savings. As a leader, she designs and issues a CI newsletter, which highlights her division and all the initiatives that have been accomplished within NMO. She was the winner of the 2010 DOE National EStar Award for her work on the H-12 Humic Acid Detoxification Project at the H-12 Outfall. This team developed and applied for a patent for a new detoxification approach.

Boler-Melton actively supports Site fundraisers for United Way, the American Heart Association and Toys for Tots. Most recently, she helped raise over $2,000 for the Toys for Tots campaign through preparation of meals.

NNSA Administrator tours H Canyon

Tom D'Agostino (left), Administrator for the National Nuclear Security Administration, toured H Canyon during a recent visit to the Savannah River Site, and received a briefing from Steve Howell, SRNS Director of Nuclear Materials Disposition.

SRS employees 'top out' important work at the Waste Solidification Building

A "topping out" ceremony was held July 14, by SRNS, Baker Concrete and Department of Energy employees celebrating the completion of all exterior construction for an important building designed to support the Mixed Oxide Fuel Fabrication Facility (MFFF) at SRS. Known as the Waste Solidification Building, its current mission will be to convert and concentrate liquid waste from the MFFF into solid waste forms acceptable for shipment to government and commercial waste disposal facilities.

ATC students get a close-up look at SRNS radiological control work

The Aiken Technical College Radiation Protection Technology program has worked closely with SRNS since it was established. In the past two years, SRNS has hosted seven ATC student tour groups, most with approximately 30 students in attendance.

Photos: Aiken Technical College student Courtney Hankinson (above) tries out a glovebox, and Alan Wise (bottom, left) explains a technician's work to visiting ATC students.

Five students and two instructors from Aiken Technical College (ATC) recently visited SRS to get a feel for "real-life" Radiological Control (RADCON) work.

On the all-day tour, the group visited the Whole Body Counting Facility, External Dosimetry, the Instrument Calibration Facility, the ALARA Center and the Radiological Training mock-ups. They also participated in a question and answer session with RADCON management, first line managers and senior radiological control inspectors. During the bus ride through SRS, the group also learned about H, S, Z, C, M and A areas.

The ATC Radiation Protection Technology program has worked closely with SRNS since it was established. In the past two years, SRNS has hosted seven ATC student tour groups, most with approximately 30 students in attendance.

SRNS has also assisted the program by contributing knowledgeable, experienced faculty and valuable equipment. SRNS' Wade Miller has been assisting ATC full-time as a loaned executive, and several current and past Site employees are now ATC professors.

Helping get the program started, SRNS loaned 43 excess radiological instruments to ATC, including contamination and direct reading radiation survey meters, to train students by simulating real world settings. Working together, SRNS and ATC are training students to become qualified radiation protection technicians ready for careers in the nuclear industry.

Scenes of SRNS

Water forms a rainbow during American Recovery and Reinvestment Act demolition work at the Disassembly Basin in R Area at the Savannah River Site. (Photograph by Megan Elliott)

Savannah River Nuclear Solutions

national security • clean energy • environmental stewardship

Our commitment is to create
innovative, effective solutions
for our country's most pressing initiatives.

Savannah River Nuclear Solutions
offers in-depth nuclear knowledge for the nation
and works to make the future of our country
secure, energy independent and environmentally responsible.

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